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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,548	01/09/2002	Peng Chum Loh	5196-000003	4658

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EXAMINER

WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,548

Applicant(s)

LOH, PENG CHUM

Examiner

Harry D Wilkins, III

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,6,8,9 and 13-15 is/are allowed.
- 6) ☒ Claim(s) 1-4,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-6, 8-11 and 13-15 are presently pending.
2. The rejections under 35 USC 103 based on Takiguchi as well as *Precious Metals* have been withdrawn in view of the newly filed declaration showing data supporting the conclusion that only within the presently claimed range are the unexpected results of hardness and ductility (reduced fractures) achieved. However, the rejection under 35 USC 102 based on *Precious Metals* has not been withdrawn.
3. The rejections of claims 5, 6, 8, 9 and 13-15 have been withdrawn in view of Applicant's remarks and submissions regarding the differences between cast alloys and powder metallurgy alloys that lead one of ordinary skill in the art away from making the combination of a cast alloy composition with the powder metallurgy composition of Miyama.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 10 and 11 are rejected under 35 U.S.C. 102(b) as anticipated by *Precious Metals*.

Precious Metals teaches (see pages 443-444 and 446-447) that gold-aluminum binary alloys were well known, and that when the aluminum content was greater than 15 wt% and up to 21.5 wt% (the AuAl₂ intermetallic), the alloy had a violet (purple) color.

The interpretation of the disclosure of *Precious Metals* in the sentence spanning pages 443 and 444, specifically "...when aluminum content increases, the alloy becomes whitish with a violet color appearing when aluminum reaches 15%, the violet color becoming strong when the composition *approaches* AuAl₂" [emphasis added] of the word "approaches" is to mean "to come very near to", this means that *Precious Metals* discloses a data point that is just below the AuAl₂ value (which is 21.5 wt% Al and a Au/Al ratio of 3.65). This data point would be between 16.5 and 21.5 wt% Al, and have an Au/Al ratio of at least 3.66. Therefore, *Precious Metals* anticipates the presently claimed range.

Regarding claims 2 and 3, while *Precious Metals* is silent as to the hardness of the Au-Al alloy, the composition of *Precious Metals* is the same as the presently claimed composition. Therefore, one of ordinary skill in the art would have expected the alloy to inherently have the same hardness as claimed.

Regarding claim 4, since the alloy of *Precious Metals* is a binary alloy, it consists of Au and Al as claimed. The range of claim 4, corresponds directly to the range of Al in claim 1, thus the reasons are the same for rejecting the ranges.

Regarding claims 10 and 11, *Precious Metals* teaches (see page 443) that the violet-gold alloys (Au-Al alloys) were used in jewelry and ornamental pieces.

Allowable Subject Matter

6. Claims 5, 6, 8, 9 and 13-15 allowed.
7. The following is a statement of reasons for the indication of allowable subject matter: each of these claims recites an Au-Al alloy with additional alloying elements of

Ni and/or Pd. Miyama teaches adding Ni or Pd (among others) to a Au-Al alloy, however, the alloy of Miyama is a powder metallurgy alloy. As discussed in Applicant's response and in the attached references, the technical differences between cast alloys (such as that of *Precious Metals* and Takiguchi) lead to differences in how alloying elements affect the composition. Therefore, one of ordinary skill in the art would not have had a reasonable expectation of successfully combining the teachings of Miyama with either *Precious Metals* or Takiguchi.

Response to Arguments

8. Applicant's arguments filed 12 May 2004 have been fully considered but they are not persuasive. Applicant argued that there is no basis in *Precious Metals* to discern a further narrower selection in the range corresponding to requisite toughness.

In response, while this is indeed true, the disclosure of *Precious Metals* is interpreted to be anticipatory in nature, and thus, does not require a selection of a narrower range. Applicant has not demonstrated or argued based upon the interpretation of the language of *Precious Metals*. Specifically, "approaches" is interpreted to mean "to come very near to", and as such, *Precious Metals* inherently discloses a data point within the range of 15-21.5 wt% Al that is much closer to 21.5 wt% than to 15 wt%, and as such, falls within the presently claimed range, including in the ratio of Au:Al. For example, one of ordinary skill in the art would consider 21 wt% Al (79 wt% Au) to be a composition that approached 21.5 wt% Al, and such alloy would have a Au:Al ratio of ~3.76. Therefore, the disclosure of *Precious Metals* anticipates the presently claimed invention. Since Applicant has not disclosed any special casting

methods to achieve the present properties of toughness and hardness, one of ordinary skill in the art would consider the alloy of *Precious Metals* to inherently possess the toughness and hardness as claimed.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-Th 10:30am-9:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harry D Wilkins, III
Examiner
Art Unit 1742

hdw


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SUPERVISORY PATENT EXAMINER
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